

# **First Annual Oversight Report of the Decentralized Gateway Vehicle Inspection Program**



**Missouri Department  
of Natural Resources**  
Air Pollution Control Program



**MISSOURI STATE  
HIGHWAY PATROL**

Department of Natural Resources  
Division of Environmental Quality  
Air Pollution Control Program

Missouri State Highway Patrol  
Motor Vehicle Inspection Division

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## List of Acronyms

EAV .....	Environmental Assistance Visit
GVIP .....	Gateway Vehicle Inspection Program
I/M.....	Inspection/Maintenance
MDAS .....	Missouri Decentralized Analyzer System
MSHP.....	Missouri State Highway Patrol
OBD .....	On-Board Diagnostics
VID .....	Vehicle Inspection Database
VIN .....	Vehicle Identification Number
VIR.....	Vehicle Inspection Report
STI.....	SysTech International

For more copies of this report, contact the Missouri Department of Natural Resources Gateway Vehicle Inspection Program at P.O. Box 176, Jefferson City, MO 65102-0176.

## **Introduction**

The vehicle emissions inspection and maintenance (I/M) program is a federally required air pollution control strategy in the St. Louis ozone nonattainment area, made up of the counties of Franklin, Jefferson, St. Charles, and St. Louis, and the City of St. Louis. The I/M program is designed to reduce ground-level ozone-forming emissions from passenger vehicles and trucks by accurately identifying the vehicles that have emissions problems and requiring their repair prior to registration renewal. Ground-level ozone is a strong oxidizing chemical that when breathed affects the lung function of everyone, especially the young, the elderly and those with respiratory illnesses such as asthma, emphysema, and bronchitis.

Pursuant to paragraph 643.337.2, RSMo, the Missouri Department of Natural Resources and the Missouri State Highway Patrol (MSHP) are issuing a joint annual report to the Missouri General Assembly on the status of the oversight measures implemented for the decentralized I/M program called the Gateway Vehicle Inspection Program (GVIP). This report summarizes the data collected regarding compliance and incidents of fraud during the first year of the Gateway Vehicle Inspection Program, which began operations on October 1, 2007. This report also provides our joint recommendations for oversight improvements to the GVIP.

## **Interagency Agreement**

To comply with paragraphs 643.303.10 and 643.337.1, RSMo, the Department of Natural Resources and MSHP entered into an interagency agreement on July 3, 2007. The department is the lead agency with respect to motor vehicle emissions inspections, and the MSHP is the lead agency with respect to motor vehicle safety inspections. This interagency agreement defines the responsibilities and coordinates the oversight activities of both agencies for the shared administration of the GVIP.

## **Station Licensing**

As of September 30, 2008, the MSHP had issued licenses to 734 public GVIP inspection stations and 19 private or government GVIP inspection stations. The MSHP had licensed approximately 4,000 emissions inspector/mechanics who are employed by the GVIP stations. The state's contractor, SysTech International (STI), provided no-cost training for emissions inspector/mechanics on a monthly basis at Ranken Technical College in St. Louis City.

For a current list of licensed GVIP inspection stations, sorted by city or by zip code, please visit the web site: <http://www.dnr.mo.gov/gatewayvip/repair/index.html>.

## **Inspection Data**

Each licensed GVIP station performs vehicle safety and emissions inspections using at least one purchased inspection analyzer from STI. These Missouri Decentralized Analyzer Systems (MDAS) send inspection information on a real time basis from the inspection stations directly to the GVIP vehicle inspection database (VID). The Department of Natural Resources, MSHP, the Department of Revenue and local license offices all have access to the VID through secure, dedicated Internet connections.

The GVIP began collecting vehicle emissions and safety inspection data on October 1, 2007. 1996 and newer model year light-duty gasoline-powered and 1997 and newer model year light-duty diesel-powered vehicles are subject to biennial emissions inspections. All model years and weight classes of vehicles are subject to biennial safety inspections.

Through September 30, 2008, 758,859 emissions inspection records and 911,160 safety inspection records were collected from GVIP stations. Emissions inspections made up 83.3 percent of the total inspection volume at GVIP stations during this first year. Through September 30, 2008, GVIP collected 77,803 vehicle emissions inspection failure records, a 10.3 percent emissions failure rate. The department issued 389 cost based repair waivers and 219 technical waivers, a 0.8 percent waiver rate. This data indicates that over 99 percent of vehicles that failed the emissions inspection were either repaired to pass the on-board diagnostics (OBD) test or not registered in the program area.

In addition to exempting 1995 and older model year light-duty gasoline-powered and 1996 and older model year light-duty diesel-powered vehicles, the GVIP was designed to increase the convenience of vehicle emissions inspections with mileage-based exemption options as well as lower cost waiver limits when compared to the previous vehicle emissions inspection program.

Through September 30, 2008, the department issued 1,852 mileage-based exemptions to two-year old vehicles driven fewer than 40,000 miles at the first required safety inspection and to older vehicles driven fewer than 12,000 miles between biennial safety inspections. Retired motorists, public transportation users, carpoolers, and vehicle collectors have all benefited from the convenience of these new emissions mileage-based exemption options. The department also issued 248 out of area exemptions to vehicles that are registered in but operated exclusively outside the St. Louis ozone nonattainment area.

## **Decentralized Emissions I/M Rule**

The Missouri Air Conservation Commission (MACC) promulgated 10 CSR 10-5.381 On-Board Diagnostics Motor Vehicle Emissions Inspections, effective August 30, 2007. This rule established the state regulations that the department and MSHP currently use to oversee and enforce the GVIP inspection requirements.

On December 4, 2008, the MACC will be holding a public hearing regarding a rule amendment to 10 CSR 10-5.381 that proposes to clarify the enforcement procedures and penalties for the GVIP. The department's Air Pollution Control Program drafted this proposed rule amendment in close consultation with the MSHP Motor Vehicle Inspection Division. After the public hearing, if the rule amendment is adopted by the MACC in February 2009, it will become effective on May 30, 2009. If adopted, this rule will enable the department and MSHP to improve our joint enforcement activities to ensure that safety and emissions inspections and repairs are conducted with the best interest of the public in mind.

## Oversight Methods

### *Real Time Inspection Data/Paperless Inspection Verification*

Each MDAS unit is connected to the VID using a dedicated Internet connection at the inspection station. Each licensed GVIP inspection station is responsible for the cost of maintaining either a low-speed or high-speed Internet connection for the MDAS units they have purchased. At the completion of each vehicle inspection, the MDAS software automatically uploads the inspection data to the VID, where it then becomes immediately available to the Department of Revenue contract license offices and online registration system for inspection verification.

As a result of this real time paperless inspection verification system, GVIP has simplified registration verification and increased registration integrity for St. Louis area Department of Revenue contract license offices. Contract license offices now have the ability to quickly identify fraudulent vehicle inspection reports (VIRs) that motorists attempt to use to bypass the vehicle inspection requirements. Contract license offices now contact DEQ as soon as such attempts have been prevented so that the department and MSHP can initiate immediate investigation of the source of these fraudulent VIRs. The department has already contacted motorists who have tried to use fraudulent vehicle inspection reports and required legitimate inspections to be performed to prevent the suspension of fraudulently obtained registrations.

### *Digital Cameras*

Each MDAS unit is equipped with a detachable digital camera. The MDAS software requires licensed inspector/mechanics to photograph the rear license plate, vehicle identification number (VIN) on the dashboard, and the odometer. An example of these three photographs is provided below. These photographs are attached to the vehicle inspection record, uploaded to the VID, and available for state agency review. As a result, the department and MSHP can be sure that the vehicle being inspected was physically present, and that the information on the vehicle inspection report is accurate.



Rear license plate



Vehicle Identification Number



Odometer

### *Bulletin Messaging and Documents Menu*

Each MDAS unit is equipped with a messaging system that allows STI, the department, and MSHP to contact individual GVIP stations or all GVIP stations to inform the inspector/mechanics about inspection procedures, billing reminders, and software updates. This bulletin messaging system also allows STI, the department, and MSHP to quickly and cost-efficiently communicate with over 700 licensed GVIP stations and over 4000 inspectors.

Each MDAS unit is equipped with a Documents menu, a digital library that stores GVIP state statutes, rules, and fact sheets, as well as comment, waiver and exemption forms. This feature

allows GVIP stations to print public information that directly assists motorists with GVIP compliance. As a result of the Documents menu feature of the MDAS, GVIP has simplified the distribution of public information to inspection stations and to vehicle owners.

#### *Laptop Audit Computers with Wireless Internet Access*

Per their contract with the state, STI has provided the department and MSHP auditors with laptop audit computers that have MDAS lane software as well as customized auditing software. These laptops are also equipped with wireless Internet access cards that allow department and MSHP auditors to securely access the VID and conduct environmental assistance visits (EAVs) and overt and covert audits. Each MDAS unit is also equipped with audit software so that if the laptop audit computers are unavailable or can't receive a wireless signal, department and MSHP auditors can still securely access the VID and conduct their EAVs and audits.

These laptop audit computers allow department and MSHP auditors to review all inspection records for all stations and inspector/mechanics while in the field. DEQ and MSHP auditing managers can review audit results on the VID as soon as the EAVs or audits are completed, and they can generate summary audit reports from the VID. As a result of these laptop audit computers with wireless Internet access, GVIP has cost-effective inspection station auditing and audit reporting.

#### *Emissions Waivers and Exemptions*

The department is responsible for issuing the cost-based emissions waivers and out of area and mileage-based emissions exemptions described earlier in this report. Motorists whose vehicles fail the emissions inspection must repair their vehicle, retest their vehicle, and if the vehicle is still failing, may then apply to the department for a cost-based waiver. Motorists must have spent more than the minimum required for the type of cost-based waiver being requested, and the vehicle must pass certain portions of the OBD test in order for the cost-based waiver to be issued. Motorists whose vehicles are being driven exclusively outside of the ozone nonattainment area may apply to the department for an out of area exemption. Two-year old vehicles have fewer than 40,000 miles at the first biennial safety inspection or whose older vehicles have fewer than 12,000 miles between biennial safety inspections are statutorily exempt from an emissions inspection, provided that motorists apply to the department for a mileage-based exemption.

The GVIP VID allows the department to review inspection records pertaining to cost-based and out of area waivers and mileage exemptions and approve or deny waiver and exemption requests in a timely fashion. As a result of these VID features, most mileage exemptions and out of area waivers are issued within one business day, and most cost-based waivers are issued within five business days. Just like vehicle inspection results, as soon as the department issues waivers or exemptions, these waivers and exemptions are available for real time verification by the Department of Revenue contract license offices and online registration system.

#### *Consumer Protection Technical Service Contracts*

GVIP has been designed to ensure maximum inspection and repair integrity. Since cost-based waivers allow a failing vehicle to be registered and operated in a failing condition for up to another two years, the department has designed a consumer protection system to ensure that: 1)

emissions repairs that motorists pay for prior to applying for a cost-based waiver are appropriate for the emissions failure, and 2) failed vehicles show an improvement after repairs prior to receiving a cost-based waiver.

Through negotiated contracts, the department has retained the services of eight local vehicle repair facilities, two in St. Louis City, four in St. Louis County, one in St. Charles County, and one in Jefferson County. These eight repair facilities serve as consumer protection technical service centers, and are paid on an as needed basis to: 1) review vehicles and repair receipts after repairs to ensure that vehicle owners who are seeking cost-based waivers have received qualified repairs that are cost-effective and appropriate for the emissions failure, and/or 2) accurately diagnose vehicles that have been repaired but haven't shown an improvement.

As a result of these consumer protection technical service contracts, the department has been able to deny waiver requests on the basis of an independent professional repair technician's review of the repairs when motorists have paid for repairs that were not performed properly or appropriate for the failure. In some cases, the independent analysis and review by one of these consumer protection technical service centers has determined that the repairs paid for were not necessary or were not performed as billed. After these reviews, the department has worked with the shops that initially performed the repairs to provide the motorists with either additional free repairs or reimbursement for the ineffective repairs that they had paid for. In other cases, the independent analysis and review by one of these consumer protection technical service centers has been able to provide motorists with accurate diagnostic information on how best to repair their vehicle to pass the OBD test. Both results have reduced the number of cost-based waivers that have been issued, thereby minimizing the air quality effect of waived vehicles while maximizing the number of fully repaired vehicles.

#### *Fingerprint Readers*

Each MDAS is equipped with a fingerprint reader. The MDAS software requires licensed inspector/mechanics to scan one finger prior to beginning each inspection. The scanned fingerprint is compared to the fingerprint that is stored on the MDAS for that inspector/mechanic. If the fingerprints match, then the identity of the inspector/mechanic is confirmed and the inspection is allowed to proceed. If the fingerprints do not match, then the inspector/mechanic cannot perform the vehicle inspection.

As a result of this technology, the department and MSHP have both a unique way of verifying the identity of each licensed inspector/mechanic and a cost-effective and fraud-resistant way to ensure that the inspector/mechanic was physically present and responsible for the inspections that the VID shows they conducted. Fingerprint readers, in combination with the trigger reports described below, have dramatically improved enforcement efficiency and capability by quickly pinpointing and documenting the inspector/mechanics who are conducting improper inspections.

#### *Trigger Reports*

As soon as the inspection data is uploaded by the MDAS systems to the VID, the inspection data is available to the department and MSHP via an Internet-based Reporting Suite. This reporting software can be accessed from the department and MSHP offices as well as the auditing laptop computers with wireless Internet cards. The Reporting Suite has a combination of standard

reports to review GVIP records and “trigger reports” that automatically identify emissions or safety inspection patterns that are inconsistent with state regulations. These trigger reports were designed by STI, the department and MSHP so that as soon as improper inspections occur, the evidence of that activity is recorded and compiled into a report, and DEQ and MSHP can initiate immediate investigation. As a result of the trigger reports on the VID, GVIP has streamlined and increased the efficiency of overt and covert audits as well as the enforcement activities of the department and MSHP.

For example, the OBD VIN Mismatch Report has revealed “clean scanning” violations occurring in several stations. Clean scanning is the illegal act of connecting the MDAS OBD cable to the computer of a vehicle other than the vehicle photographed and identified on the vehicle inspection report, with the intent of bypassing the required OBD test procedure for the vehicle being inspected. By comparing the VIN that the inspector/mechanic entered with the VIN that the vehicle reported through its OBD system, the OBD VIN Mismatch Report has efficiently identified the inspector/mechanics who have clean scanned vehicles. Once these cases were investigated and confirmed, MSHP took immediate enforcement action, which is described below.

#### *Equipment Lockouts and License Suspensions*

Because MDAS units must stay connected with the VID to perform vehicle inspections, the department and MSHP have the ability to apply an electronic “lockout” that removes the permission of an inspector/mechanic or a GVIP station from using their MDAS. This lockout is an effective tool that allows the department and MSHP to prevent an inspection station from performing future improper inspections.

In addition to having their MDAS systems locked out from performing inspections, inspection stations that have been found to be involved with clean scanning vehicles or other improper inspection activities have had their inspection licenses suspended for up to one year. Lockouts are removed once the license suspension for such activity has been served. As a result of the equipment lockouts and license suspensions, GVIP has been able to limit fraudulent vehicle inspections as soon as they have been detected.

#### *Federal Prosecutions*

Because the federal Clean Air Act mandates that ozone nonattainment areas implement vehicle emissions I/M programs, inspector/mechanics who engage in inspection fraud activities such as clean scanning can be prosecuted for violating the Clean Air Act. The department and MSHP have collaborated with the U.S. Environmental Protection Agency Office of Criminal Investigations and the U.S. Attorney’s Office on investigations of vehicle inspection fraud and inspection document falsification. On September 24, 2008, a federal grand jury indicted three inspector/mechanics from two inspection stations, American Automotive Sales & Service and Sure Start Tire and Battery, with Clean Air Act violations. These individuals have been charged with intentionally conducting fraudulent vehicle emissions inspections via clean scanning.

## **Oversight Results**

In its first year of operations, the GVIP has improved vehicle registration integrity by providing all Department of Revenue contract license offices with a real time verification system for

vehicle safety and emissions inspection results without the use of paper VIRs. Because all GVIP inspection results are available on a real time basis to the Department of Revenue and local contract license offices through a secure, dedicated Internet connection, the GVIP is now able to instantly assure the Department of Revenue of the validity of inspection records. This system has prevented multiple attempts of document registration fraud and led to the investigation and identification of the individuals who were producing fraudulent vehicle inspection reports.

In its first year of operations, the GVIP has implemented an improved auditing system that has streamlined the department and MSHP oversight of vehicle emissions and safety inspections. The combined effect of all of the integrated oversight methods described above is that DEQ and MSHP can cost-effectively audit, detect, enforce, and then prevent further emissions and safety inspection fraud.

As a direct result of GVIP oversight methods described in this report, the MSHP has suspended or revoked more than 30 inspector/mechanic licenses for “clean scanning” violations. Additional investigations are underway, and violation reports are being submitted for further action as once the investigations become finalized. Through September 30, 2008, MSHP has suspended or revoked the following station licenses:

#### St. Louis City

American Automotive Sales & Service, 1457 South Vandeventer, 63110, License #115368  
Bill's Automotive, 4239 East Martin Luther King Drive, 63113, License #115100  
Century Tire, 4701 Gravois Road, 63116, License #115016  
Joseph Leake Service, 4582 Martin Luther King Drive, 63113, License #115458  
OK Used Cars, 6900 Noonan, 63143, License #115077  
Southside Motors, 4700 Eichelberger, 63116, License #115367

#### St. Louis County

Joe Bess Automotive, 242 Lemay Ferry Road, 63125, License #096084  
J & M Service, 2020 Patterson, 63031, License #096191  
Precision Automotive, 10484 West Florissant, 63136, License #096405  
Sure Start Tire and Battery, 6767 St. Charles Rock Road, 63133, License #096265

## **Conclusion**

In summary, the GVIP oversight measures described in this report are working as designed and, as the program matures, will have an even greater potential for compliance and enforcement capabilities. The department and MSHP will continue to jointly ensure compliance with state vehicle inspection statutes and rules, remove violators from the program, and work for the public health and safety by overseeing an inspection program with proven value and integrity. Lastly, both agencies will also continue working with STI to enhance the oversight tools needed so that the department and MSHP can identify more violations and improve enforcement capabilities.